Claims after this response:

1(Currently Amended). An apparatus comprising:

a code strip carrier having a plurality of code tracks thereon;

an illumination system for illuminating said code tracks to generate a light signal from each code track, each code track comprising a plurality of dark and light stripes, said dark stripes generating a light signal having a lower intensity than the light signal generated by said light stripes;

a plurality of read heads, each read head comprising a photodetector positioned to detect light from a corresponding one of said code tracks as that code track moves relative to said read head;

a controller for generating an absolute position value related to the position of said code strip carrier relative to an origin position, wherein

one of said code tracks comprises a first absolute position track that provides an indication of said absolute position value when said code strip carrier is at each of a plurality of predetermined absolute positions relative to said origin position; and

a different one of said code tracks comprises an incremental position track for generating a digital value indicative of a displacement of said code strip carrier relative to the last predetermined absolute position, wherein said incremental position track comprises alternating dark and light stripes and wherein said read head corresponding to said incremental position track generates a first logic signal indicating the direction of travel of said code strip carrier relative to that read head and a second logic signal that changes state each time a boundary between a dark stripe and a light stripe passes under that read head.

2(Currently Amended). The apparatus of Claim 1 wherein said first absolute position track comprises a plurality of unique code sequences distributed on said absolute position track, each code sequence indicating that one of said predetermined absolute positions has

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been passed when a predetermined stripe in that code sequence has passed said read head corresponding to said absolute position track, wherein said predetermined strips are equally spaced on said code strip carrier.

3(Canceled). ~~The apparatus of Claim 1 wherein said incremental position track comprises alternating dark and light stripes and wherein said read head corresponding to said incremental position track generates a first logic signal indicating the direction of travel of said code strip carrier relative to that read head and a second logic signal that changes state each time a boundary between a dark stripe and a light stripe passes under that read head.~~

4(Currently Amended). ~~The apparatus of Claim 1~~ An apparatus comprising:

        a code strip carrier having a plurality of code tracks thereon;

        an illumination system for illuminating said code tracks to generate a light signal from each code track, each code track comprising a plurality of dark and light stripes, said dark stripes generating a light signal having a lower intensity than the light signal generated by said light stripes;

        a plurality of read heads, each read head comprising a photodetector positioned to detect light from a corresponding one of said code tracks as that code track moves relative to said read head;

        a controller for generating an absolute position value related to the position of said code strip carrier relative to an origin position, wherein

        one of said code tracks comprises a first absolute position track that provides an indication of said absolute position value when said code strip carrier is at each of a plurality of predetermined absolute positions relative to said origin position; and

        a different one of said code tracks comprises an incremental position track for generating a digital value indicative of a displacement of said code strip carrier relative to the last predetermined absolute position, wherein said code strip carrier comprises a reflective

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medium having a reflectivity that is altered by exposing said medium to light of an intensity greater than a predetermined intensity.

5(Currently Amended). The apparatus of Claim 1 wherein one of said tracks comprises a state track that provides a state value corresponding to each of a plurality of said absolute position values and wherein said controller when ever said controller outputs and said absolute position value, said state value being different from said absolute position value or said digital value indicate of said displacement of said code strip carrier.

6(Currently Amended). A method for determining the position of a code strip carrier relative to a predetermined origin position, said method comprising:

providing a plurality of code tracks on said code strip carrier;

illuminating said code tracks to generate a light signal from each code track, each code track comprising a plurality of dark and light stripes, said dark stripes generating a light signal having a lower intensity than the light signal generated by said light stripes;

providing a plurality of read heads, each read head positioned to detect light from a corresponding one of said code tracks as that code track moves relative to said read head, said read head generating a signal indicative of the intensity of light reaching that read head;

generating an absolute position value related to the position of said code strip carrier relative to an origin position, wherein

one of said code tracks comprises a first absolute position track that provides an indication of said absolute position value when said code strip carrier is at each of a plurality of predetermined absolute positions relative to said origin position; and

a different one of said code tracks comprises an incremental position track for generating a digital value indicative of a displacement of said code strip carrier relative to the last predetermined absolute position, wherein said incremental position track comprises alternating dark and light stripes and wherein said read head corresponding to said

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incremental position track generates a first logic signal indicating the direction of travel of said code strip carrier relative to that read head and a second logic signal that changes state each time a boundary between a dark stripe and a light stripe passes under that read head.

7(Currently Amended). The method of Claim 6 wherein said first absolute position track comprises a plurality of unique code sequences distributed on said absolute position track, each code sequence indicating that one of said predetermined absolute positions has been passed when a predetermined stripe in that code sequence has passed said read head corresponding to said absolute position track, wherein said predetermined strips are equally spaced on said code strip carrier.

8(Canceled). ~~The method of Claim 6 wherein said incremental position track comprises alternating dark and light stripes and wherein said read head corresponding to said incremental position track generates a first logic signal indicating the direction of travel of said code strip carrier relative to that read head and a second logic signal that changes state each time a boundary between a dark stripe and a light stripe passes under that read head.~~

9(Currently Amended). ~~The method of Claim 6~~ A method for determining the position of a code strip carrier relative to a predetermined origin position, said method comprising:

_____providing a plurality of code tracks on said code strip carrier;

_____illuminating said code tracks to generate a light signal from each code track, each code track comprising a plurality of dark and light stripes, said dark stripes generating a light signal having a lower intensity than the light signal generated by said light stripes;

_____providing a plurality of read heads, each read head positioned to detect light from a corresponding one of said code tracks as that code track moves relative to said read head, said read head generating a signal indicative of the intensity of light reaching that read head;

_____generating an absolute position value related to the position of said code strip carrier relative to an origin position, wherein

one of said code tracks comprises a first absolute position track that provides an indication of said absolute position value when said code strip carrier is at each of a plurality of predetermined absolute positions relative to said origin position; and

a different one of said code tracks comprises an incremental position track for generating a digital value indicative of a displacement of said code strip carrier relative to the last predetermined absolute position, wherein said code strip carrier comprises a reflective medium having a reflectivity that is altered by exposing said medium to light of an intensity greater than a predetermined intensity.

10(Currently Amended).   The method of Claim 6 wherein one of said tracks comprises a state track that provides a state value corresponding to each of a plurality of said absolute position values and wherein said controller outputs said state value when ever said controller outputs and said absolute position value, said state value being different from said absolute position value and said digital value indicate of said displacement of said code strip carrier.

In the Specification and Abstract, replace the title of the invention by:

"Absolute Encoder that Utilizes a Coarse Absolute Encoder and a Fine Incremental Encoder"